COLORADO RIVER RECOVERY PROGRAM
FY 2002 ANNUAL PROJECT REPORT

RECOVERY PROGRAM
PROJECT NUMBER: 50

I. Project Title: **Five-Year Experimental Stocking Plan to Evaluate Survival of Various Sizes of Razorback Sucker**

II. Principal Investigator(s): Chuck McAda, Project Leader
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III. Project Summary:

The study goal was to evaluate the relation between survival of captive-reared razorback sucker and size at release into the Upper Colorado and Gunnison rivers in western Colorado. Specific objectives included determining 1) the relationship between various sizes (100-, 200-, and 300-mm) of razorback sucker stocked and their subsequent survival in the wild, and 2) dispersal of stocked fish following release over time. The optimum size(s) of razorback sucker to be stocked into Upper Colorado River Basin rivers were recommended.

No field work was conducted in FY 2002. A final report was due March 2002. However, preparation of the draft final report was delayed. The draft final report was completed on 31 May 2002 and reviewed by the Upper Colorado River Endangered Fish Recovery Program propagation and genetics coordinator. Revisions were made and the report was sent to two peer reviewers and the Biology Committee the first of July 2002 for review and comment. Revisions have been made by the principal investigator from the comments provided by the peer reviewers. A second revised draft final report was sent out on 31 October 2002 to the Biology Committee for additional review. Review of this report and approval by the Biology Committee is anticipated in early-December 2002. Completion and distribution of the final report is anticipated sometime in early-2003.

IV. Study Schedule:
a. initial year: 1996
b. final year: 2002

V. Relationship to RIPRAP:

Colorado River Action Plan: Mainstem and Gunnison River

IV. Manage genetic integrity and augment or restore populations.
IV.A. Augment or restore populations as needed.
IV.A.1.Razorback sucker.
IV.A.1.a. Develop experimental augmentation plan and seek Program acceptance.
IV.A.1.b. Implement experimental augmentation plan.
IV.A.1.b.(2). Monitor and evaluate results; make recommendations regarding further augmentation.

VI. Accomplishment of FY 2002 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

A. FY-2002 Tasks and Deliverables: Tasks 3–4.

Task 3. Analyze and evaluate data; prepare annual progress report.
Task Completed.

Task 4. Prepare draft and final report.
Task Completed.

B. Findings: No field work was conducted during FY-2002.

Conclusions (taken from the draft final report)

1. The number of razorback sucker recaptured that were stocked at lengths less than 200 mm was low, and therefore, post-stocking survival was probably related to the size of razorback sucker stocked. Larger size-classes (> 200 mm) had a higher recapture rate than did razorback sucker stocked at smaller sizes. This was substantiated by a single family lot (1992–2A) that had the highest return of any other family lot stocked; the average length at stocking was 343 mm TL. Stocking razorback sucker smaller than 200 mm may be futile because it is assumed that their post-stocking performance (i.e., survival) in the wild was poor. Greater returns and thus higher survival may be obtained if larger (> 200 mm), but fewer, razorback sucker are stocked into riverine environments.

2. Dispersal following stocking was predominantly downstream from the release site indicating that domestic-produced razorback sucker were very susceptible to downstream drift.

3. Recaptured razorback sucker were most frequently collected from backwater habitats (65%) than any other habitat type.

4. Electrofishing appears to be a practical method for monitoring stocked razorback sucker

because many habitats within extensive river reaches can be sampled over a shorter-period of time than with other gear types. However, it remains uncertain whether electrofishing is the most efficient method because it is size-selective (i.e., selects for larger fish). For the most part, while different gear types were used to

sample and monitor stocked razorback sucker, they were not evaluated to determine which was more effective in collecting stocked razorback sucker.

VII. Recommendations:

A. Taken from the draft final report.

1. Continue stocking domestic-raised razorback sucker in the Upper Colorado and Gunnison rivers at a minimum size of 200 mm.

2. Monitor stocked razorback sucker immediately following release, and at a frequency necessary to determine a) survival, b) dispersement, c) river-reach retention, d) distribution, and e) abundance.

3. Continue marking razorback sucker stocked in the wild with PIT tags.

4. Continue to measure individual marked (PIT tagged) razorback sucker to be stocked.

5. Monitor the subsequent reproductive contribution to the adult razorback sucker population in the Upper Colorado and Gunnison rivers.

6. Identify Spawning Areas. Spawning areas of razorback sucker in the Upper Colorado and Gunnison rivers should be identified so that these sites can be further protected.

7. Genetic Monitoring and Evaluation. Determine if the appropriate genetic variability and integrity of progeny are being maintained in accordance with the Recovery Program genetics management plan using the current breeding strategies.

8. Temper transport water and add salt.

9. Site-acclimate stocked fish.

VIII. Project Status:

A. Field work was completed in FY-2001.
B. Completion and distribution of the final report is anticipated sometime in early-2003.

IX. FY 2002 Budget Status

A. Funds Provided: $ 13,000
B. Funds Expended: $ 13,000
C. Difference: $ –0–
D. Percent of the FY 2002 work completed, and projected costs to complete: N/A.
E. Recovery Program funds spent for publication charges: $ –0– in FY-2002; Anticipated to be about $ 1,500 in FY-2003 to print and distribute final report.

X. Status of Data Submission (Where applicable):

A. Records of all PIT-tagged razorback sucker stocked in 1995, 1996, 1997, 1998, 1999, 2000, and 2001 were computerized and are available from the UCRB database manager in Grand Junction, Colorado. Records of stocked razorback sucker that were subsequently captured during followup monitoring have also been computerized. These computerized records of recaptured razorbacks are provided to the UCRB database manager at his request.

XI. Signed: *Bob D. Burdick* 12/9/2002
Principal Investigator Date

APPENDIX:

A. More comprehensive/final project reports. If distributed previously, simply reference the document or report. None.

Prepared and compiled by Bob D. Burdick, 12/09/2002

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